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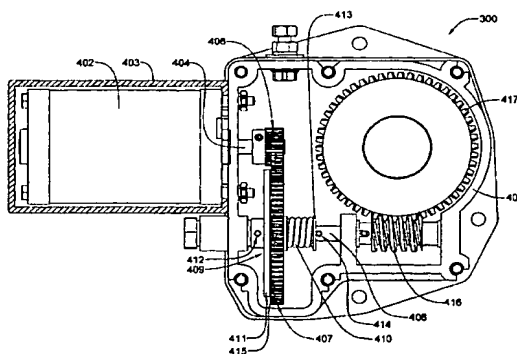
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(54) Title: TORQUE-LIMITED ELECTRIC SERVO SYSTEM FOR DEPLOYING A VEHICLE SNOW CHAIN TRACTION SYSTEM



(57) Abstract: A single unit (300) of the new deployment system includes a housing to which an electric drive motor (402) is externally mounted. The deployment system for each vehicle requires at least a pair of deployment units: one each for right and left wheels. Each unit (300) includes a reversible electric drive motor (402) having an armature shaft (404); an intermediate drive shaft (408); a worm (416) axially affixed to the intermediate drive shaft (408); an output shaft (501); a shock damper (502) affixed to the output shaft (501); a worm gear (417) affixed to the shock damper (502), the worm gear (417) meshing with the worm (416), and providing rotational locking for said output shaft (501); and a deployment arm (303) coupled to the output shaft (501), the deployment arm (303) having rotatably mounted thereto a friction drive disc, said friction drive disc (105) having peripherally attached thereto a plurality of chain segments (106A, 106B, 106C). Torque applied to the output shaft by the electric motor is limited either by a spring-loaded clutch (409) axially mounted on the intermediate drive shaft or by a circuit which limits current drawn by the electric drive motor to a preset maximum.